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(71)Applicant : KOBE STEEL LTD

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TANAKA FUKUTERU**(54) THIN STEEL SHEET EXCELLENT IN STRETCH-FLANGING PROPERTY AFTER SHEARING AND SHEET STOCK USING THE SAME THIN STEEL SHEET**

(57)Abstract:

**PROBLEM TO BE SOLVED:** To produce a high strength thin steel sheet excellent in stretch-flanging properties after shearing and to produce a sheet stock obtd. by subjecting the thin steel sheet to shearing at machining allowance of the sheet thickness or below.

**SOLUTION:** This thin steel sheet has a chemical compsn. contg., by weight, 0.08 to 0.25% C, 0.8 to 3.0% Mn,  $\leq 0.01\%$  S, 0.01 to 0.1% Al, 0.001 to 0.010% N, and the balance Fe with inevitable impurities, having a structure composed of low temp. transformation generated phases or composite phases composed of this phase and ferrite and having  $\geq 0.7$  yield ratio. Or, it contains the steel components and has a structure composed of low temp. transformation generated phases and ferrite. The ratio of the hardness Hv (S) of the low temp. transformation generated phases to the hardness Hv ( $\alpha$ ) of the ferritic phases, i.e., Hv ( $\alpha$ )/Hv (S) is regulated to 0.3 to 0.6, and the number of the low temp. transformation generated phases having a specified shape is regulated to  $\leq 20$  pieces per  $104\mu\text{m}^2$ .